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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR      | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|---------------------------|---------------------|------------------|
| 09/704,916      | 11/02/2000  | William Brewster Robinson | 99-969              | 4616             |

32127 7590 05/05/2005

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EXAMINER

HECK, MICHAEL C

ART UNIT PAPER NUMBER

3623

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/704,916

Applicant(s)

ROBINSON ET AL.

Examiner

Michael C. Heck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 1899 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 February 2005 has been entered.

2. The following is a First Office Action in response to the request for continued examination filed 25 February 2005. Applicant amended claims 21 and 65. Claims 1-72 are pending in this application and have been examined on the merits as discussed below.

### ***Response to Amendment***

3. The objection to the drawings in the Final Office Action is not withdrawn in response to the applicant's submission of replacement drawings. Please see the objection below.

### ***Drawings***

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "58" has been used to designate both the continue box on Figure 4 and the title, i.e., "Worklist View – user BEN", on figure 5. The Examiner notes that Specification has been amended to indicate the title, i.e., "Worklist View – user

BEN", is reference character 59 (see Specification p.16, lines 21-28). The Examiner notes corrected drawings were submitted by the applicant on 01 July 2004 to correct multiple deficiencies including the above title objection, however, the drawings supplied with the Request for Approval of Drawing Corrections did not reflect the changes so described in the written explanation of the changes supplied with the amendment, nor were they in the proper format. In fact, they were the same as the original drawings. Again, the applicant submitted corrected drawings with the request for continued examination on 25 February 2005, however, the drawings supplied as an Amendment to the Drawings did not reflect the changes nor were they in the proper format. They were again the same as the original drawings. The Applicant is reminded that Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 72 (See Figure 5).

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "226" has been used to designate both the "Make the WorkitemBean accessible to a forwarded URL for this request" box and the "Forward this request to URL of Activity UI page" box on figure 18.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: 192 (See specification, p. 28, lines 26-31, in reference to notification control page 42-16, figure 16).

8. The drawings are objected to because details identified in the figures are difficult to read or cannot be read. The figure shows a gray or black area with written information in the black area that is difficult to read or cannot be read. Figures affected are: figures 3, 5, 8, 9, 10, 10A, 11, 13, 14 and 16. New drawings are required that show the display of information or the information as referenced in the specification.

9. Figure 3 is objected to because:

- The box titled "Activity UI" is indicated as 44-15, however figure 15 and the specification refer to the activity user interface as 44.
- The box titled "Process Instance Creation UI" is indicated as reference character 44. The specification has been changed to indicate the "Process Instance Creation UI" is now the "Process Instance Activity UI" and refers to reference character 44. It appears the "Activity User Interface" and the "Process Instance Activity UI" are two distinct boxes with distinct functions as described in the specification, therefore, failing to comply with 37

CFR 1.84(p)(4) because the reference character "44" has been used to designate both the "Activity User Interface" and the "Process Instance Activity UI".

- The reference characters for the "filter Control" box are "42-9, -10, -11, -12". Change the reference characters to be -- 42-9, -10, -10A, -11, -12, -13 --.
- On page 21, lines 3-11, of the specification, the Template View control page 42-8 is linked to the worklist view and an Instance View. The instance view is the process instance view control page 42-6. On figure 3, the interconnecting lines indicating relationships between views (i.e., Monitor Instance, Process Instance, Notifications and Worklist View) are missing between the Template View, Worklist View and the Process Instance.

10. The drawings are objected to because on Figure 20, reference is made to the "Process instance Creation UI" page in box 260 and 262 and indicates the "Process instance Creation UI" page is 44. The specification has been changed to indicate the "Process Instance Creation UI" is now the "Process Instance Activity UI". Please see the objection to Figure 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

11. The disclosure is objected to because of the following informalities:
  - On page 8, lines 31-32, delete "redirecting the user form the user interface page back to", and insert -- redirecting the user **from** the user interface page back to --.
  - On page 27, lines 14-21, the Applicant identifies Figure 13 as the "results control page 42-13", however the display is the same as Figure 5, which is to display a user's current worklist. The Examiner want to make sure that Figure 13 is to be the same as Figure 5 as opposed to Figure 9, which its the Filter-Worklist View where the filter expression is displayed along with the worklist.
  - On page 43, line 33, delete "process instance user interface file 44", and insert -- process instance **activity** user interface file 44 --.

The above citation is a mere guide. Applicant is requested to review the specification thoroughly to eliminate additional errors. Appropriate correction is required.

***Response to Arguments***

12. Applicant's arguments filed 25 February 2005 regarding claims 1 and 31 have been fully considered but they are not persuasive. After careful review of the Applicant's arguments and the combined art of Brandt et al. (U.S. Patent 5,892,905) and Click, Jr. et al. (U.S. Patent 6,523,570), the Examiner has reversed the Advisory Action statement that the arguments concerning independent claims 31 and 1 were convincing. The Applicant asserts that there does not exist a *prima facie* case of obviousness against independent claim 31 since (1) Brandt et al. and Click, Jr. et al., taken alone or in combination, do not teach or suggest every limitation in claim 31; and (2) one of ordinary skill in the art would not have been motivated to combine Brandt et al. and Click, Jr. et al. The applicant asserts the AD file 204 of Click, Jr. et al. is used to compile platform dependent object code without any intervention or interfacing by the platform-independent object code (Click, Jr. et al.: col. 5, lines 50-67); and there is no teaching in Click, Jr. et al. of either of the object codes receiving output data from a workflow management system for output to a user because the object codes in Click, Jr. et al. are limited to being compiled together to form a target platform object code (e.g., and executable). As to combining the references, the Applicant asserts that Click, Jr. et al.'s compiler for porting software between platforms and Brandt et al.'s formatting commands received from a user-interface for presentation to a software application are distinct and separate areas of computing that would not have been an obvious combination to one of ordinary skill in the art.

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In response, the Applicant's assertion that "Click, Jr. et al. is used to compile platform dependent object code without any intervention or interfacing by the platform-independent object code" is erroneous. Click, Jr. et al. specifically recite that during run time (execution), the platform independent compiler object code, interacts with the platform dependent compiler object code to operate (i.e., compile) in a target dependent manner (Click, Jr. et al.: col. 6, lines 16-22). As to being no teaching in Click, Jr. et al. of either of the object codes receiving output data from a workflow management system for output to a user, the combination teaches a workflow management system in Brandt et al. (i.e., FlowMark) where data can be retrieved from a plurality of software applications and inserted into a single web page which is output to a web browser (Brandt et al.: col. 13, lines 11-13, and col. 16, lines 44-46). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Both Brandt et al. and Click, Jr. et al. refer to an interface and transferring data over coupled computer networks, such as the Internet. Specifically, Brandt et al. teach a computer apparatus and method for providing a common user interface for software applications accessed via the World-Wide-Web (Brandt et al.: Title); and Click, Jr. et al. teach the interface manages all

information transfer between the platform dependent object code and the compilation engine in response to a particular request. This arrangement is particularly well suited for applications involving transferring data over coupled computer networks, such as the Internet, local area networks (LAN's), and the like (Click, Jr. et al.: col. 6, lines 47-50 and 57-63). Therefore, Brandt et al. and Click, Jr. et al. are combinable.

13. Applicant's arguments with respect to claim 65 have been considered but are moot in view of the new ground(s) of rejection. Please see the 35 USC 103(a) rejection below.

14. Applicant's arguments filed 25 February 2005 regarding claims 4, 18, 34 and 50 have been fully considered but they are not persuasive. Applicant asserts Brandt et al. does not teach the claimed limitation of causing a predefined protocol page to be presented to a user for performing work on a task. In response, Brandt et al. teach the supplied HTML templates include one or more variables. The values for the variables are requested from the associated software application. The software application either receives the data corresponding to the variable or initiates software processes to generate the appropriate data (Brandt et al.: col. 15, lines 25-44). Brandt et al. also teach FMIG provides a way for the FlowMark application to interact with a web user of the WWW. FMIG directs the flow of information between the CGI and the FlowMark application and initiates FlowMark functions by using FlowMark APIs. For example, the FMIG may invoke a FlowMark API to create a process instance necessary to process the request submitted by the user (Brandt et al.: col. 20, lines 58-65).

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15. Applicant's arguments filed 25 February 2005 regarding claims 7, 21, 37 and 53 have been fully considered but they are not persuasive. Applicant asserts Brandt et al. does not teach the new instance of the process template defines a specific set of tasks. In response, Brandt et al. teach that in processing the request for input data, the software application may initiate additional software processes to generate the data, call other programs that have the data, or retrieve data for local and/or networked data storage. The software application then returns the requested data to the gateway. The gateway then substitutes the variables in the HTML template with the data retrieved from the software application. The gateway then outputs the HTML template to the web server with the real data substituted for the substitution variables. To facilitate the use of the Internet/application gateway as a gateway between the software application and the web server, a library of HTML templates are provided. The library of HTML templates provides a flexible and easily customizable way of providing access to multiple software applications (Brandt et al.: col. 15, lines 3-23). Brandt et al. also teach FMIG provides a way for the FlowMark application to interact with a web user over the WWW. FMIG directs the flow of information between the CGI and the FlowMark application and initiates FlowMark functions by using FlowMark APIs. For example, the FMIG may invoke a FlowMark API to create a process instance necessary to process the request submitted by the user. Then, using a different FlowMark API, the FMIG can invoke or start this process instance (Brandt et al.: col. 20, lines 58-67). The Examiner submits that a process instance is the representation of a single enactment of a process. It represents the unit of work (i.e. task) with respect to a business process,

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which passes through a workflow management system (WfMC Terminology & Glossary, Workflow Management Coalition, Doc. Number WfMC-TC-1011, Issue 3.0, February 1999).

16. Applicant's arguments with respect to claims 15, 29, 47, and 63 have been fully considered but they are not persuasive. Applicant argues that other than the notification page, the office action fails to cite any support for the pages in the group as claimed. The applicant indicates that claim 47, as well as claims 15, 29, and 63 recite the limitations of the control page comprising a page selected from a group consisting of a worklist page, a process instance page, a process template page, a work item control page, a filter control page, and a notification page. In response, the examiner interpreted, based on the wording of the claim, that demonstrating art for one of the listed limitations is sufficient, that is, the notification page is selected from the group.

17. Applicant's arguments, see p. 25, filed 25 February 2005, with respect to the rejection(s) of claims 71-72 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made. Please see the 35 U.S.C. 103(a) rejection below.

18. Applicant's arguments with respect to claims 3, 17, 33 and 49 have been fully considered but they are not persuasive. Applicant argues that Smith (Smith, Protocol Work Melds Storage Methods, Network World, 13 September 1999, p. 67 [PROQUEST]) fails to teach record locking a task in a workflow management system, invoking a first and/or second object to record lock a task, and checking out the task to

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the user for the user to work on the task. In response, Brandt et al. teach a user performs an action that causes the web browser to request access to a software application via the WWW by inputting data to a web server application. The input data comprises an URL or other address data that specifies the location of an HTML template (Brandt et al.: col. 14, lines 43-60). Also, Brandt et al. teach FMIG provides a way for the FlowMark application to interact with a web user of the WWW. FMIG directs the flow of information between the CGI and the FlowMark application and in and initiates FlowMark functions by using FlowMark APIs. For example, the FMIG may invoke a FlowMark API to create a process instance necessary to process the request submitted by the user. Then, using a different FlowMark API, the FMIG can invoke or start this process instance (Brandt et al.: col. 20, lines 58-67). The Examiner submits that a process instance is the representation of a single enactment of a process. It represents the unit of work (i.e. task) with respect to a business process, which passes through a workflow management system (WfMC Terminology & Glossary, Workflow Management Coalition, Doc. Number WfMC-TC-1011, Issue 3.0, February 1999). Smith teaches that as for dealing with instances in which more than one user wants access to the same data simultaneously, vendors can use the Common Internet File Services (CIFS) protocol's soft locking mechanism to manage file system coherency and deal with multi-user contention. The soft lock operates as a file or record lock that can be relinquished for contention-resolution purposes (Para 9). Please see the paragraph 12 above regarding objects. The combination of Brandt et al., Click, Jr. et al. and Smith teach the said limitations.

Please see the 35 U.S.C. 103(a) rejections below.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 1, 2, 4, 7-16, 18, 21-32, 34, 37-48, 50, and 53-64** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt et al. (U.S. Patent 5,892,905) in view of Click, Jr. et al. (U.S. Patent 6,523,570). Brandt et al. disclose a flexible web-based interface for workflow management systems comprising:

- **[Claim 31]** configuring a set of predefined protocol user interface pages comprising at least one control page with said predefined protocol having at least one server-side script embedded therein (col. 14, lines 43-60, and col. 15, lines 64-66, Brandt et al. teach an interface components mechanism that uses HTML variables and templates. A user performs an action that causes the web browser to request access to a software application via the WWW by inputting data to a web server application. The input data comprises an URL or other address data that specifies the location of a HTML template. The HTML templates include input variables that are used to pass data between the web browser and the software application.);
- calling at least one server program with the at least one control page which thereby invokes at least one of the first workflow platform-dependent object and the at least one second workflow platform-independent object, wherein, when the functionality of the workflow management system is to be accessed via the set of predefined protocol user interface pages, the at least one control page calls the at least one server program which, in turn, invokes at least one of the first and second objects to promote data translation and exchange between the client program and the workflow management system (col. 19, lines 10-41, col. 19, line 62 to col. 20, line 3, col. 20, line 54-63, Brandt et al. teach FlowMark as a popular process engineering tool that

allows a relatively complex project or task to be broken down into a series of smaller processes or tasks. Information is processed by the FlowMark workflow software and usually involves multiple related activities. The Internet/application gateway includes a Common Gateway Interface (CGI), a FlowMark/Internet Gateway (FMIG), and WWW Application Program Interfaces (APIs). The user who needs to access a FlowMark application over the WWW will input a request to a web browser using a client workstation. The user can enter a URL for a specific home page site or click on a button presented in an HTML-generated user interface using the web browser. When the user "submits" the requested information, usually by clicking on a button on an HTML form, a web server application receives the input data from the web browser. After receiving the data from the web browser, the CGI parses the data to locate relevant information about the requested processes, including the request for access to FlowMark. The CGI sends the user data and requests to the FMIG along with some control information. The FMIG provides a way for FlowMark applications to interact with a web user over the WWW. The FMIG directs the flow of information between the CGI and the FlowMark application and initiates FlowMark functions by using FlowMark APIs.).

Brandt et al. does not teach pointing at least one first workflow platform-dependent object to access the workflow functionality, wherein the at least one first workflow platform-dependent object is customized for the workflow management system, and interfacing at least one second workflow platform-independent object with the at least one first workflow platform dependent object, wherein the at least one second workflow platform independent object is configured to provide input data received from the client server to the at least one first workflow platform dependent object and to receive output data provided by the workflow management system from the at least one first workflow platform dependent object. However, Brandt et al. does teach that a user who needs to access a FlowMark application over the WWW will input a request to a web browser using a client workstation. FlowMark is a workflow application (col. 19, lines 2-4 and 52-64). Clicks, Jr. et al. teach porting software between different computing platforms. A

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platform specific compiler includes platform dependent compiler object code and platform independent compiler object code, which are suitable for execution on a particular hardware platform. An interface that is partially embedded in the platform independent object code and partially embedded in the platform dependent object code mediates flow of information between the platform independent compiler code and the platform dependent compiler object code during platform specific compiler run time. During run time (execution), the platform independent compiler object code, interacts with the platform dependent compiler object code to operate (i.e., compiler) in a target dependent manner (col. 1, lines 36-39, col. 2, lines 42-51, col. 6, lines 16-22). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use the platform specific compiler of Click, Jr. et al. with the teachings of Brandt et al. since Brandt et al. teach the application gateway facilitates a response to the request by formatting the appropriate commands to the software application (col. 9, lines 8-34). Providing a common user interface for accessing various software applications over the WWW allows for increased productivity with greater efficiency (Brandt et al.: col. 33, lines 32-40). The multi-platform compiler system in conjunction with the architecture design file particular to a specific target platform substantially reduces the time required to port a compiler from one platform to another different platform by substantially reducing the use of manual code generation (Click, Jr. et al.: col. 4, lines 46-53). The success or failure of an enterprise depends to a large extent on the quality of the decision making within the enterprise. The domain or the "extent of the world" used to make the decision leads to more optimal decision. Having access to



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different application programs via the World Wide Web through a common user interface expands the domain of the decision making process. Therefore, since the "extent of the world" is increased, the decisions made will be more optimal.

- **[Claim 32]** the step of logging a user on to the workflow management system via one of the set of predefined protocol pages, receiving a user identification variable and a password variable therefrom, and invoking at least one of the first and second objects to authenticate the user identification variable with the workflow management system (Brandt et al.: col. 8, lines 30-39, Brandt et al. teach that web security uses a password and userID combination to authenticate a particular web user to access a particular web server or specific resource through the web server).
- **[Claim 34]** the step of issuing a redirection command to cause a predefined protocol page represented by the target user interface address to be presented to the user for performing work on the task identified by the work item identification (Brandt et al.: col. 15, lines 25-44, and col. 20, lines 58-65, Brandt et al. teach the supplied HTML templates include one or more variables. The values for the variables are requested from the associated software application. The software application either receives the data corresponding to the variable or initiates software processes to generate the appropriate data. Brandt et al. also teach FMIG provides a way for the FlowMark application to interact with a web user of the WWW. FMIG directs the flow of information between the CGI and the FlowMark application and in and initiates FlowMark functions by using FlowMark APIs. For example, the FMIG may invoke a FlowMark API to create a process instance necessary to process the request submitted by the user.).
- **[Claim 37]** the step of a receiving predefined process template identification from the at least one control page, and invoking at least one of the first and second objects to initiate a new instance of a process template in the workflow management system corresponding to the process template identification, wherein the new instance of the process template defines a specific set of tasks (Brandt et al.: col. 15, lines 3-23, and col. 20, lines 58-67, Brandt et al. teach that in processing the request for input data, the software application may initiate additional software processes to generate the data, call other programs that have the data, or retrieve data for local and/or networked data storage. The software application then returns the requested data to the gateway. The gateway then substitutes the variables in the TML template with the data retrieved from the software application. The gateway then outputs the HTML template to the web server with the real data substituted for the substitution variables. To facilitate the use of the

Internet/application gateway as a gateway between the software application and the web server, a library of HTML templates are provided. The library of HTML templates provides a flexible and easily customizable way of providing access to multiple software applications. Brandt et al. also teach FMIG provides a way for the FlowMark application to interact with a web user of the WWW. FMIG directs the flow of information between the CGI and the FlowMark application and in and initiates FlowMark functions by using FlowMark APIs. For example, the FMIG may invoke a FlowMark API to create a process instance necessary to process the request submitted by the user. Then, using a different FlowMark API, the FMIG can invoke or start this process instance.).

- **[Claim 38]** the step of determining whether input data is needed to initiate the new instance of the predefined process template (Brandt et al.: col. 16, lines 7-23, Brandt et al. teach an input variables are inserted into HTML pages to provide input from web browsers to the Internet/application gateway and software applications. The Internet/application gateway can be configured to pass a particular variable from one HTML screen to the next HTML screen. The examiner interprets to process to include a determination since a particular variable is to be identified.).
- **[Claim 39]** the step of redirecting the user to a user interface page to receive required input data to properly initiate the new instance of the process template with the input data if the determining step results in a determination that data is needed to initiate the process instance (Brandt et al.: col. 16, lines 7-46, Brandt et al. teach input variables are inserted into HTML pages to provide input from web browsers to the Internet/application gateway and software applications. The Internet/application gateway can be configured to pass a particular variable from one HTML screen to the next HTML screen. User-defined variables can be added to HTML templates by system operators to provide specialized inputs and outputs as needed for different types of software applications. The examiner interprets the process to include a determination since a particular variable is to be identified.).
- **[Claim 40]** the step of redirecting the user from the user interface page back to the New Instance servlet to update the workflow management system with the received input data to initiate the process instance (Brandt et al.: col. 15, lines 25-44, and col. 16, lines 7-46, Brandt et al. teach software applications receive data corresponding to the variables or initiate software processes to generate the appropriate data. Input variables are inserted into HTML pages to provide input from web browsers to the Internet/application gateway and software applications. The Internet/application gateway can be configured to pass a particular variable from one HTML screen to the next HTML screen.).

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- **[Claim 41]** at least one predefined protocol user interface page adapted to receive at least one data variable from the user and to call the at least one server-based applet (Brandt et al.: col. 15, lines 64-66, Brandt et al. teach the HTML templates include input variables that are used to pass data between the web browser and the software application).
- **[Claim 42]** the user interface page further comprises at least one <FORM> tag having at least one input element for receiving data from the user (Brandt et al.: figure 11-22, Brandt et al. teach <FORM ACTION> is used.)
- **[Claim 43]** the user interface page is adapted to provide at least one data variable to initiate a process template into a running process that requires the data entry for instantiation (Brandt et al.: figure 11-22, and col. 23, lines 5-41, Brandt et al. teach an INPUT TYPE is needed, such as compact, mid size, full size or luxury for the rental reservation example. An activity program receives car rental information, locates the next reservation number, saves the reservation number to a file, returns the reservation number to the requester and sets the reservation number in the output data container.).
- **[Claim 44]** the user interface page is adapted to provide at least one data variable to complete a task from a previously initiated process that requires the data entry for completion (Brandt et al.: figure 11-22, and col. 23, lines 5-41, Brandt et al. teach an activity program receives car rental information, locates the next reservation number, saves the reservation number to a file, returns the reservation number to the requester and sets the reservation number in the output data container. Figure 11 data input is used for figure 13 and figure 14.).
- **[Claim 45]** the first and second objects are Java classes (Brandt et al.: col. 6, lines 4-12, Brandt et al. teach other types of data besides HTML may be used to be transmitted to a web browser including Java applets (executable code)).
- **[Claim 46]** the Java class comprises a Java interface class (Brandt et al.: col. 6, lines 4-12, Brandt et al. teach other types of data besides HTML may be used to be transmitted to a web browser including Java applets (executable code)).
- **[Claim 47]** the at least one control page comprises a page selected from a group consisting of a worklist page, a process instance page, a process template page, a work item control page, a filter control page, and a notifications page (Brandt et al.: col. 28, lines 9-56, Brandt et al. teach the process will send a reservation confirmation HTML screen to the web client at the clients workstation. Figure 13 shows the HTML code for the reservation

confirmation template. The examiner interprets the reservation confirmation template to be the notification page.).

- **[Claim 48]** the client program is a web browser and the client server is a web server (Brandt et al.: col. 5, lines 52-54, and col. 6, lines 3-5, Brandt et al. teach the web browser is a software program running on the clients workstation and the client workstation and web server computer system are the same physical and/or logical computer system.).

**Claims 1, 2, 4, 7-16, 18, 21-30, 50, and 53-64** substantially recite the same limitations as that of claims 31, 32, 34, and 37-48 with the distinction of the recited method being an interface and method. Hence the same rejection for claims 31, 32, 34, and 37-48 as applied above applies to claims 1, 2, 4, 7-16, 18, 21-30, 50, and 53-64.

21. **Claims 3, 5, 17, 19, 33, 35, 49, and 51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt et al. (U.S. Patent 5,892,905) and Click, Jr. et al. (U.S. Patent 6,523,570) in view of Smith (Smith, Protocol Work Molds Storage Methods, Network World, 13 September 1999, p. 67 [PROQUEST]). As to **Claim 33**, Brandt et al. and Click, Jr. et al. disclose a flexible web-based interface for workflow management systems comprising the step of receiving a work item identification and a target user interface address from the at least one control page. Brandt et al. teach a user performs an action that causes the web browser to request access to a software application via the WWW by inputting data to a web server application. The input data comprises an URL or other address data that specifies the location of an HTML template (Brandt et al.: col. 14, lines 43-60). Brandt et al. and Click, Jr. et al. fail to teach invoking at least one of the first and second objects to record lock a task in the workflow management system corresponding to the work item identification and permit

exclusive access by a user to the task identified by the work item identification by checking out the task to the user for the user to work on the task. Smith teaches that as for dealing with instances in which more than one user wants access to the same data simultaneously, vendors can use the Common Internet File Services (CIFS) protocol's soft locking mechanism to manage file system coherency and deal with multi-user contention. The soft lock operates as a file or record lock that can be relinquished for contention-resolution purposes (Para 9). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use the CIFS protocol's soft locking mechanism of Smith with the teachings of Brandt et al. and Click, Jr. et al. since Brandt et al. teach multiple users connected to the system (Brandt et al.: col. 10, lines 42-50). Providing a common user interface for accessing various software applications over the WWW allows for increased productivity with greater efficiency (Brandt et al.: col. 33, lines 32-40). Extending these file-sharing protocols will let vendors deliver storage-area network (SAN) that can share data with any authorized client on the network (Para 11). The success or failure of an enterprise depends to a large extent on the quality of the decision making within the enterprise. The domain or the "extent of the world" used to make the decision leads to more optimal decision. Having access to different application programs and data via the World Wide Web through a common user interface expands the domain of the decision making process. Therefore, since the "extent of the world" is increased, the decisions made will be more optimal.

- **[Claim 35]** the step of receiving a work item identification from the at least one control page and invoking at least one of the first and second objects to

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release a record lock on a task in the workflow management system corresponding to the work item identification and terminate any exclusive access by a user to work on the task identified by the work item identification (Brandt et al.: col. 16, line 49 to col. 17, line 25, Brandt et al. teach an identifier is created to identify the specific communication between the user and the software application. The identifier is attached to all information transmitted between the user and the software application. Smith: Para 9, Smith teaches that as for dealing with instances in which more than one user wants access to the same data simultaneously, vendors can use the Common Internet File Services (CIFS) protocol's soft locking mechanism to manage file system coherency and deal with multi-user contention. The soft lock operates as a file or record lock that can be relinquished for contention-resolution purposes. For example, if one client wished to write to the same file as a second client, the NAS/SAN server revokes the soft lock given to the first client and takes over the management of write operations using traditional NAS methodologies.).

**Claims 3, 5, 17, 19, 49, and 51** substantially recite the same limitations as that of claims 33 and 35 with the distinction of the recited method being an interface and method. Hence the same rejection for claims 33 and 35 as applied above applies to claims 3, 5, 17, 19, 49, and 51.

22. **Claims 6, 20, 36 and 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt et al. (U.S. Patent 5,892,905) and Click, Jr. et al. (U.S. Patent 6,523,570) in view of Notani et al. (U.S. Patent 6,397,191). As to **Claim 36**, Brandt et al. and Click, Jr. et al. disclose a flexible web-based interface for workflow management systems but fail to teach the step of receiving task-specific data from a requesting page and updating the task identified by the work item identification with the task-specific data in the workflow management system. Notani et al. teach the process for data access and transformation for an object-oriented workflow includes supporting communication of objects and derived format objects built from native format objects. The process

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involves communicating information between activities of an executing workflow using objects and derived format objects (Notani et al.: col. 2, lines 40-51). The examiner interprets activities as tasks. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the process for data access and transformation of Notani et al. with the teachings of Brandt et al. and Click, Jr. et al. since Brandt et al. teaches providing standard procedures, routines, tools, and software "hooks" for accessing software applications over the WWW (col. 3, lines 56-65). Maximizing productivity and efficiency while maintaining flexibility and minimizing cost enhances a company's competitiveness in the marketplace. Having access to the collaborative management systems from remote locations via the Internet allows managers to be continually engaged in the management of the company and their external relationships. Enterprise collaboration provides an advantage over conventional supply chain, enterprise and site planning environments (Notani et al.: col. 2, lines 21-24). Providing a common user interface for accessing various software applications over the WWW allows for increased productivity with greater efficiency (Brandt et al.: col. 33, lines 32-40). As such, productivity and efficiency of the manager are enhanced and the flexibility of the manager is greatly increased. Cost to implement is minimal since access to the Internet is fairly common wherever the manager may be. Therefore, access to the company and collaborative management systems from remote locations is a great advantage for the manager and company and helps the company maintain its competitiveness in the marketplace.

**Claims 6, 20 and 52** substantially recite the same limitations as that of claim 36 with the distinction of the recited method being an interface and method. Hence the same rejection for claim 36 as applied above applies to claims 6, 20 and 52.

23. **Claims 71-72** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt et al. (U.S. Patent 5,892,905) and Click, Jr. et al. (U.S. Patent 6,523,570) as applied to claim 32. As to **Claim 72**, Brandt et al. and Click, Jr. et al. disclose a flexible web-based interface for workflow management systems but fails to teach directing the user to a user interface filter page; receiving filter parameters via the user interface filter page; and invoking at least one of the first and second objects to filter a work list with the workflow management system. The Examiner takes Official Notice that it is old and well known in the workflow management system art to have the capability to request information the meets a certain criteria. For Example, an online telephone directory allows the user to request information about a certain person or organization and the result is only the information the user requested. Another is the ability to request transaction histories for a certain time period, such as accounts receivable for the current month, quarter, or tax year. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the filter capability with the workflow management system since it is well known into the art to use filters to look at specific historical information of interest to the user as opposed to the entire database.



**Claim 71** substantially recites the same limitations as that of claim 72 with the distinction of the recited method being an interface. Hence the same rejection for claim 72 as applied above applies to claims 71.

24. **Claims 65-70** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt et al. (U.S. Patent 5,892,905) and Click, Jr. et al. (U.S. Patent 6,523,570) in view of Boden et al. (U.S. Patent 5,930,512). Brandt et al. and Click, Jr. et al. disclose a flexible web-based interface for workflow management systems comprising:

- **[Claim 65]** creating at least one predefined protocol process activity page relating to a process and named for the unique process identifier, wherein the process corresponds with a function of the workflow management system and defines one or more tasks (Brandt et al.: col. 7, lines 1-40, col. 20, lines 58-67, and col. 23, line 40 to col. 24, line 23, Brandt et al. teach when a web server application that is running on a web server computer receives a web page request from a web browser, it will build a web page in HTML or retrieve a file containing a pre-built web page and send it across a connection to the requesting browser. Some web pages are designed to elicit input from a web browser. FMIG provides a way for the FlowMark application to interact with a web user over the WWW. FMIG directs the flow of information between the CGI and the FlowMark application and initiates FlowMark functions by using FlowMark APIs. For example, the FMIG may invoke a FlowMark API to create a process instance necessary to process the request submitted by the user. Then, using a different FlowMark API, the FMIG can invoke or start this process instance. Referring to the Car Rental Example, the person or user who wants to rent a car will access the WWW by using a client workstation, which is running a web browser. The user will enter the URL for the rental car agency and locate the home page site for the rental car agency using the web browser. The web server receives an input from a web browser specifying the HTML template of a rental reservation form as the next output that needs to be sent back to the web browser. Once the user has input the information, the user submits the information by clicking on a "submit" button on the rental reservation form. At this point, the web server application receives the data stream generated by the user request from the web browser. One suitable format picks out all variables and other relevant information data and sends it to a web server application in a post data stream format. The web server application examines the data stream from the web browser to determine

what action should be taken to fulfill the user's request. The Examiner interprets the Car rental example as a workflow management system and the HTML template of a rental reservation form is a process activity page relating to a process and named for the unique process identifier. The Examiner also interprets a process instance represents the unit of work (i.e. task) with respect to a business process, which passes through a workflow management system (i.e., FlowMark).

- locating the at least one predefined protocol process activity page in the predefined interface root directory path (Brandt et al.: col. 23, lines 42-57, Brandt et al. teach the person or user who wants to rent a car will access the WWW by using a client workstation that is running a web browser and will enter the URL for the rental car agency and locate the home page site for the rental car agency. Click, Jr. et al. : col. 3, lines 18-30, Figures 6A and 6B, Click, Jr. et al. teach an apparatus for compiling a platform specific compiler that includes a set of user defined platform dependent compiler architecture descriptors that describe corresponding architectural features of a particular hardware platform. An architecture descriptor compiler converts the user defined platform dependent compiler architecture descriptors into the platform dependent compiler source code, which is converted into platform dependent object code by a host compiler. During run-time for the platform specific compiler, an interface mediates the flow of information between platform dependent compiler object code and platform independent compiler object code.);
- creating a process directory beneath the predefined interface root directory path for the process and named for the unique identifier thereof (Brandt et al.: col. 26, lines 49-56, Brandt et al. teach that when the car rental reservation process model was initially built, the first activity program was identified and designated to run automatically whenever the car reservation process model was invoked. There will be multiple related activity programs that will work together to process the car rental request. Each individual activity program is a separate software module that is designated to accomplish a specific task or return some requested information. Click, Jr. et al. : col. 3, lines 18-30, Figures 6A and 6B, Click, Jr. et al. teach an apparatus for compiling a platform specific compiler that includes a set of user defined platform dependent compiler architecture descriptors that describe corresponding architectural features of a particular hardware platform.);
- creating at least one predefined protocol user interface page within the created process directory in a predetermined protocol relating to a task assignable within the process and named for the task unique identifier if the process requires input on any of its assignable activities (Brandt et al.: col. 23, lines 42-57, Brandt et al. teach the person or user who wants to rent a car will

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access the WWW by using a client workstation that is running a web browser and will enter the URL for the rental car agency and locate the home page site for the rental car agency. Click, Jr. et al. : col. 3, lines 18-30, Figures 6A and 6B, Click, Jr. et al. teach an apparatus for compiling a platform specific compiler that includes a set of user defined platform dependent compiler architecture descriptors that describe corresponding architectural features of a particular hardware platform. An architecture descriptor compiler converts the user defined platform dependent compiler architecture descriptors into the platform dependent compiler source code, which is converted into platform dependent object code by a host compiler. During run-time for the platform specific compiler, an interface mediates the flow of information between platform dependent compiler object code and platform independent compiler object code.);

- locating the at least one predefined protocol user interface page in the created directory within the predefined interface root directory path (Brandt et al.: col. 25, lines 21-33, and col. 26, lines 49-56, Brandt et al. teach that by using HTML templates with substitution variables, a single relatively simple GCI module in conjunction with an FMIG can provide an effective interface between a web server and a plurality of software applications. This allows system operators to provide easily customizable web access to a plurality of software applications over the WWW. When the car rental reservation process model was initially built, the first activity program was identified and designated to run automatically whenever the car reservation process model was invoked. There will be multiple related activity programs that will work together to process the car rental request. Each individual activity program is a separate software module that is designated to accomplish a specific task or return some requested information.); and
- whereby the predefined protocol process activity page can be automatically located by the interface within the predefined interface root directory path of the client server by only knowing the process unique identifier and the at least one predefined protocol user interface page can be located in the created directory within the predefined interface root directory path by knowing only the task unique identifier (Brandt et al.: col. 26, lines 49-56, Brandt et al. teach that when the car rental reservation process model was initially built, the first activity program was identified and designated to run automatically whenever the car reservation process model was invoked. There will be multiple related activity programs that will work together to process the car rental request. Each individual activity program is a separate software module that is designated to accomplish a specific task or return some requested information.).

Brandt et al. and Click, Jr. et al. fail to teach the workflow management system being configured to assign the task to users and to monitor work performed on the tasks. Boden et al. teach FlowMark staff (person) definition entails identifying people at the enterprise to the FlowMark database and, for each person defined, specifying a level, an organization, and multiple roles. These attributes can be used at run time to dynamically assign activities to people with suitable attributes. A workflow server is accessed and executed on the Internet by: (1) starting the web browser; (2) pointing to a URL; (3) selecting from the browser a process to view, edit or execute; (4) if viewing, then browsing (examining) the process; (5) if editing, then browsing and modifying the process by selecting the process and running a script to modify the process; (6) if executing, then selecting the appropriate workflow server and process to execute; and (7) depending on the selected process definition, executing the selected workflow process (Boden et al., col. 7, lines 44-49, and col. 23, line 55 to col. 24, line 5). The Examiner interprets viewing as the process of monitoring. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the assigning and monitoring capability to the workflow management system of Brandt et al. and Click, Jr. et al. since Brandt et al. teach a software application is a workflow application known as FlowMark (Brandt et al.; col. 19, lines 2-4). Utilizing the natural distributive nature of the Web, increases productivity and efficiency when working with common software applications. Providing a common user interface for accessing various software applications over the WWW allows for increased productivity and efficiency. The flexibility of using more software applications becomes available (Brandt

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et al.: col. 33, lines 32-40). HTML fits the workflow problem better than its current implementation. By marrying workflow and web, the naturally distributed nature of the web improves upon the current FlowMark capability (Boden et al.: col. 25, lines 44-54). Therefore, access to a software application over the WWW allows for efficiency and productivity to improve.

- **[Claim 66]** the step of embedding a form within the at least one user interface page in the predefined protocol configured so as to provide any required data to the assignable task into the workflow management system (Brandt et al.: col. 25, lines 21-33, and col. 26, lines 49-56, Brandt et al. teach that by using HTML templates with substitution variables, a single relatively simple GCI module in conjunction with an FMIG can provide an effective interface between a web server and a plurality of software applications. This allows system operators to provide easily customizable web access to a plurality of software applications over the WWW. When the car rental reservation process model was initially built, the first activity program was identified and designated to run automatically whenever the car reservation process model was invoked. There will be multiple related activity programs that will work together to process the car rental request. Each individual activity program is a separate software module that is designated to accomplish a specific task or return some requested information.).
- **[Claim 67]** the form contains input prompts configured so as to provide specific data in a machine readable format to the workflow management system (Brandt et al.: col. 23, line 58 to col. 24, line 23, Brandt et al. teach the user inputs information such as member number, last name, car preference and submits information by clicking on the "submit" button. The web server application examines the data stream to determine what action should be taken to fulfill the user's request.).
- **[Claim 68]** the step of embedding a hidden field on the at least one user interface page containing the unique process identifier for cross-referencing the data within the at least one user interface page with the workflow management system (Brandt et al.: col. 26, lines 1-12, Brandt et al. teach that to assure that FMIG can match up the process instance with the web browser that requested it, the FMIG generates and stores a "handle" for the web client that is some combination of the process instance name, the activity instance name, and the security data for the web client. The examiner interprets the "handle" as an embedded hidden field.).

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- **[Claim 69]** the predefined protocol comprises at least one of HTML and javascript (Brandt et al.: col. 6, lines 13-21, Brandt et al. teach software programs running on a web server computer system typically output data pages of HTML data to web browsers in response to requests.).
- **[Claim 70]** the step of defining a programming object for use as an input container for delivering data entered by a user on the at least one user interface page (Brandt et al.: col. 7, lines 23-40, Brandt et al. teach a web page may request the user's name in an HTML form and require the user to select a particular function using an HTML button).

### ***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Swenson (U.S. Patent 6,574,675) disclose simple workflow access protocol.
- Bowman-Amuah (U.S. Patent 6,289,283) discloses a system, method, and article of manufacture for a globally addressable interface in a communication services patterns environment.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Heck whose telephone number is (571) 272-6730. The examiner can normally be reached Monday thru Friday between the hours of 8:00am - 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (571) 273-6729.

Any response to this action should be mailed to:

**Director of the United States Patent and Trademark Office  
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[Official communications; including After Final communications labeled "**Box AF**"]

**(571) 273-6730**

[Informal/Draft communication, labeled "**PROPOSED**" or "**DRAFT**"]

mch  
02 May 2005

  
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